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**Proposal for
Princeton Pumping Plant Fish Screen Facility
Cost Share Funding**

Applicant: Reclamation District No. 1004
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Colusa, California 95932
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**Type of Organization
and Tax Status:** Political Subdivision of the State of California

Tax ID No: 941647202

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Financial Contact: Lisa Weber
Reclamation District No. 1004

Participants: Engineer: Ensign & Buckley Consulting Engineers
Environmental: Hanson Environmental
Legal: Minasian, Minasian, Minasian, Spruance, Baber, Meith, and
Soares L.L.P.
Agency Consultation: NMFS, USF&WS, DFG, DWR, BUREC, NRCS
Contractor: To be determined by competitive bid

Project Group: Public Works/Construction Project

Executive Summary

Project Title and Applicant Name:

Title: Princeton Pumping Plant Fish Screen Facility
Applicant: Reclamation District No. 1004 (District)

Project Description and Primary Biological/Ecological Objectives:

This Proposal requests funding from Category III to complete the design and construction of a positive barrier fish screen for the District's unscreened diversion on the Sacramento River near the town of Princeton. The project involves construction of a new state-of-the-art fish screen facility and moving the point of diversion to a new, stable, less fishery sensitive area of the river. The specific objective of the project is to prevent entrainment of winter-run Chinook salmon, spring-run Chinook salmon, fall-run Chinook salmon, late fall-run Chinook salmon, steelhead, splittail, and other high risk species; and to assure a reliable year-round supply of water for about 15,000 acres of agricultural land, and 10,000 acres of migratory wetlands.

Approach/Tasks/Schedule:

The District's intended approach is to complete the design in consultation with the responsible resource agencies, finalize the environmental documentation, obtain the necessary permits, procure the required right-of-way, obtain bids for construction, perform the relocation work, and construct the fish screen facility. The design, environmental documentation, permitting, construction supervision, and administration of the work will be performed by the District with the assistance of consultants. Construction will be performed by a qualified contractor, to be selected by competitive bid. The District will operate and maintain the facility. The major tasks for completion of the project are: Final Design/Permitting; Relocation/Construction; and Construction/Implementation. Final Design is scheduled for completion by January 28, 1998. Relocation work is scheduled for completion by November 25, 1997. Construction is scheduled for completion of work in the river by November 17, 1998, completion of remaining construction activities by December 29, 1998, and beginning of start-up testing on April 16, 1999.

Justification for Project and Funding by CALFED:

Entrainment losses at unscreened diversions result in direct mortality to fishery resources, which have been identified as a principle stressor by CALFED. Reductions in direct entrainment mortality at unscreened diversions, particularly those located within critical fisheries habitat of the Sacramento - San Joaquin Bay-Delta system, have been identified as a high priority action. The District's Princeton Pumping Plant is located within the area of the Sacramento River designated by the National Marine Fisheries Service (NMFS) as critical habitat for winter-run salmon. Biological monitoring at the site has documented that winter-run, spring-run, fall-run, and late fall-run sized juvenile Chinook salmon, steelhead, splittail, and other sensitive resident and migratory fish species are currently entrained at this unscreened diversion. The project is, therefore, consistent with identified stressors and priorities for project funding by CALFED. In addition, the project represents a cooperative effort, with involvement in the design by U.S. Fish & Wildlife Service (USFWS), U.S. Bureau of Reclamation (USBR), California Department of Fish & Game (DFG), and NMFS, with significant financial matching support through the CVPIA Anadromous Fish Screen Program.

Budget Costs and Third Party Impacts:

The District is seeking a \$3,510,000 cost share for the final design and construction of its new, state-of-the-art fish screen. The amount requested represents about 43 percent of the total project costs. The balance of the project will be paid for by the federal government and the District. The District has budgeted for, and will pay for the operation and maintenance of the facility, which is currently estimated to be \$35,000 per year, over the 40 year project life. The only third party impact from the project, is the need to acquire right-of-way for the project. The acquisition will affect only one District landowner, who is willing to negotiate the sale of this land.

Applicant Qualifications:

The project will be managed by the District with the assistance of their Engineer, Ensign & Buckley Consulting Engineers (EB), and their Environmental Consultant, Hanson Environmental, Inc. (Hanson). EB has provided engineering services to the District for over 15 years, and has provided services in the planning, design, and construction of over 10 fish screen projects in the State of California. Hanson has provided monitoring services, prepared environmental documents, and prepared permit applications for several fish screen projects in the State of California. A qualified contractor will be selected to perform the construction through a competitive bid process, and the construction will be supervised by the District and their Engineer.

Monitoring and Data Evaluation:

Extensive fisheries monitoring has been performed at the Princeton Pumping Plant to document the species composition, seasonal occurrence, and size distribution of juvenile and adult fish entrained at the unscreened diversion. Data from this monitoring provides a basis for predicting biological benefits associated with the project. Monitoring of the screen performance has been incorporated into the project and will be performed in consultation with the DFG and the NMFS. Effectiveness of the fish screen will be determined by compliance with NMFS/DFG fish screening criteria.

Local Support/Coordination with Other Programs/Compatibility with CALFED Objectives:

The District prepared a 25 page brochure, describing the project, its location, purpose, and objectives. It was distributed to the District's landowners, tenants, local interest groups, resource agencies, and public officials in Washington D.C. The District has received much recognition for the project, as well as overwhelming support from private organizations such as the Nature Conservancy, California Waterfowl Association, Ducks Unlimited, Northern California Water Agency, and the Central Valley Project Water Association.

The feasibility study, preliminary design, and environmental documentation work for the project was coordinated with the CVPIA Anadromous Fish Screen Program, through consultation with its technical team. The project permitting, design, and construction will be performed in consultation with the technical team and other regulatory agencies.

Construction of a fish screen for this unscreened diversion is consistent with the identified stressors and priorities for project funding by CALFED. The prevention of entrainment of high risk fish species will result in a significant improvement in the aquatic habitat of the Sacramento - San Joaquin Bay-Delta system. In addition, the project will assure a reliable year-round supply of water to approximately 10,000 acres of migratory wetland habitat, which provide some of the most significant migratory waterfowl habitat in the Central Valley and in all of North America.

**Proposal for
Princeton Pumping Plant Fish Screen Facility
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1. Project Description

- a. *Project Description and Approach:* This Proposal requests funding from CALFED to complete the design and construction of a positive barrier fish screen for Reclamation District No. 1004's (District) unscreened diversion on the Sacramento River near the town of Princeton. The specific goal of the project is to prevent entrainment of winter-run Chinook salmon, spring-run Chinook salmon, fall-run Chinook salmon, late fall-run Chinook salmon, splittail, steelhead, and other high risk species; and to assure a reliable year-round supply of water to about 15,000 acres of agricultural land and 10,000 acres of migratory wetlands.

A *Feasibility and Preliminary Design Report* has been prepared for this project, and is available on request. Section 2 includes excerpts from the report, which provide an overview of the project. Enclosed are the preliminary design drawings for the project; a preliminary cost estimate; and an estimate of operation, maintenance, replacement, and power costs. The principal components of the project are:

- a new fish screen and pump sump;
- an inclined flat plate screen aligned with the bank of the river at the sump entrance;
- automatic fish screen cleaning systems;
- electrical control systems;
- an adjustable baffle system for screen approach velocity adjustment;
- sediment exclusion facilities;
- relocated pumps and controls;
- a reinforced concrete pipeline from the sump to the Sacramento River Levee;
- a gated box culvert levee crossing; and
- a concrete lined ditch from the levee crossing to Drumheller Slough.

The District's intended approach is to complete the design and construct the facility utilizing the team shown in the Organization Chart, Figure 1, included in Section 2. The specific tasks to complete the work, in chronological order, are to finalize the environmental documentation; complete the design in consultation with the agencies; obtain permits; procure right-of-way, perform the relocation work; and construct the fish screen facility. The design, environmental documentation, permitting, and construction supervision will be performed by the District, with the assistance of the existing team of consultants. All work will be performed in consultation with the Anadromous Fish Screen Program Technical Team, headed by the U.S. Fish & Wildlife Service (USFWS). The construction work will be performed by a qualified contractor, under a competitively bid construction contract. Upon start-up and commissioning of the facility, an evaluation program will be carried out by the California Department of Fish and Game (DFG) and the National Marine Fisheries Service (NMFS). The District will operate and maintain the facility with in-house staff, who will be trained by the contractor and consultants during start-up.

- b. *Location and/or Geographic Boundaries of Project:* The new fish screen facility is located within the Sacramento River Watershed region on the left bank of the Sacramento River, at River Mile 164.0, in Glenn County. The Princeton Pumping Plant lifts water from the Sacramento River into Drumheller Slough, which is the primary source of irrigation water for the District. The District provides water service for about 15,000 acres of agricultural land, and 10,000 acres of migratory wetlands within the Butte Basin in Glenn and Colusa Counties.

- c. **Expected Benefits:** Expected benefits of the project include a substantial reduction in direct entrainment mortality to juvenile winter-run, spring-run, fall-run, and late fall-run Chinook salmon; steelhead; splittail; and other resident and migratory fish inhabiting the Sacramento River. Based upon DFG and NMFS fish screening criteria, resource agencies have estimated the reduction in entrainment losses of juvenile fish (e.g., juvenile Chinook salmon) to be approximately 95%, when compared with the existing unscreened diversion facility.

The project will also benefit migratory waterfowl. It will assure a reliable year-round supply of water for about 10,000 acres of migratory wetlands. Although this benefit can not be quantified, these wetlands are considered some of the most significant waterfowl habitat in the Central Valley and in all of North America.

The project will have direct benefits within the Sacramento River, and indirect benefits to wildlife habitat in the Butte Sink. The District also diverts water from Lower Butte Creek. The long-term goal is to exchange a portion of these diversions to the Sacramento River, utilizing the new facility, thereby providing direct benefits to Butte Creek, which is an important Spring-Run spawning habitat.

- d. **Background and Biological/Technical Justification:** The District voluntarily installed and tested acoustical barriers at the existing Princeton Pumping Plant in 1994 and 1995, under the U.S. Bureau of Reclamation's (BUREC) *Pilot Fish Screen Demonstration Program*. The evaluations failed to demonstrate the guidance efficiencies required by the NMFS for a behavioral barrier.

In consultation with the Anadromous Fish Screen Program Technical Team, the District performed a feasibility study to select a fish screen facility configuration and prepared a preliminary design and cost estimate for the selected configuration. The *"Draft" Feasibility and Preliminary Design Report* was issued in May 1996. The selected configuration was an on-river flat plate screen, aligned with the river bank, with a new concrete sump constructed in the bank of the river.

Subsequent to the issuance of the *"Draft" Feasibility and Preliminary Design Report*, a study, requested by the Technical Team and performed by the California Department of Water Resources (DWR), raised concerns about river bank instability at the existing site. Based upon the DWR report, and in consultation with the Technical Team, a revised preliminary design was developed using the selected configuration and relocating the facility to a historically stable section of the river, about one-half mile downstream of the existing Princeton Pumping Plant. This relocation, when compared with stabilizing the existing site, is more cost effective and will reduce the environmental impact. Also, preliminary measurements have shown that the new site has a more stable depth and better velocity distribution than the existing site and is, therefore, better suited for construction of a fish screen.

Extensive fisheries monitoring at the Princeton Pumping Plant has documented entrainment at this unscreened diversion. In addition, the NMFS has issued a biological opinion for the Princeton Pumping Plant diversion which states *"An effective method of eliminating entrainment at this diversion must be developed since it contributes to the cumulative loss of juvenile Winter-Run Chinook Salmon at unscreened diversions throughout the Sacramento River. The long-term solution for this facility may include positive barrier screens, modification of pumping schedules, and the use of new technologies such as acoustic barriers if they are shown to be as effective as positive barrier screens."* Evaluations of acoustic barriers performed by the District failed to demonstrate the required efficiencies. The diversion is also operated 10 out of 12 months, therefore, pumping schedules can not be significantly altered. Based upon the DFG and NMFS estimates, a positive barrier screen at this facility will result in an estimated reduction in entrainment losses of approximately 95%. Construction of a positive barrier screen for the

Princeton Pumping Plant and relocating the facility to a "historically stable" portion of the river will provide a permanent solution for fisheries enhancement and protection in the Sacramento River.

The "Final" *Feasibility and Preliminary Design Report* for the project was completed in June 1997, and a *Basis of Design* for the project has been distributed to the responsible agencies for review and approval. The Environmental Documents for the project have been submitted for informal review by the resource and regulatory agencies. After a preliminary review, the Environmental Documents will be distributed for public comment, and the permitting process will begin. Environmental documents and permit applications are scheduled for completion in November 1997.

Expenditures to date on the feasibility work and environmental documentation have been about \$200,000. A portion of these expenditures were paid for using CVPIA Funds, Proposition 70 Funds, and Category III Funds. Final Design for the project has begun utilizing limited funds available from the DFG through Proposition 70.

- e. Proposed Scope of Work: The Scope of Work for the project has been broken down into five phases:

- ▶ Phase I - Preliminary Design and Feasibility Study
- ▶ Phase II - Expanded Feasibility Study and Environmental Documentation
- ▶ Phase III - Final Design/Permitting
- ▶ Phase IV - Relocation/Construction
- ▶ Phase V - Construction/Implementation

Phases I and II of the project are complete. The specific tasks for each phase are broken down in Table No. 3, *Estimated Budget and Scope of Work*, included in Section 2.

The deliverables for *Phase III - Final Design/Permitting* will be the 35%, 85%, and 100% design submittals and the Bid Documents. Deliverables for *Phase IV - Relocation/Construction* are completion of the utility relocations and some construction work related to the facility relocation, outside of the river channel. Deliverables for *Phase V - Construction/Implementation* are completion of the fish screen construction and the pipeline within the river channel; start-up and commissioning of the facility; and completion of the screen evaluation program.

Monthly progress reports for the project will be prepared and distributed on the first of the month to the NMFS, USFWS, and DFG screen engineering staff. These reports will be distributed to CALFED participants, as requested. The reports include an updated overall project schedule, a description of activities completed in the previous month, and a description of activities anticipated for the upcoming month.

For consultant service contracts, monthly billings which detail man-hours spent on individual activities, are received by the fifth of the month. For construction work, monthly progress payment applications will be requested from the Contractor. Applications will be based upon the percentage of components of the work, and will be certified by the Engineer for progress. Certified progress payment applications will be available by the 5th of each month following the completion of the work. Using this data, financial reports can be submitted to CALFED on a quarterly basis, or as otherwise requested. Form of the reports will be the same as that used for previous work funded under Category III, or as required by CALFED.

f. Monitoring and Data Evaluation:

Extensive fisheries monitoring has been performed at the Princeton Pumping Plant to document the species composition, seasonal occurrence, and size distribution of juvenile and adult fish entrained at this unscreened diversion. Data from these monitoring programs provide a basis for predicting biological benefits associated with the positive barrier fish screen. Monitoring of fish screen performance, incorporated as part of the project, will include, but not be limited to, measurements of the tolerance of screen panels and other components during construction, extensive measurement of approach velocities and adjustment of baffles as necessary to ensure compliance with DFG and NMFS screening criteria, and periodic underwater inspection of the screen structure and its performance (e.g., debris accumulation) as part of routine operations. Underwater inspection of the screen will be performed by DFG and NMFS staff. Performance of the fish screen will be determined by compliance with NMFS and DFG intake design criteria, including measurement of approach velocities and screen construction specifications.

g. Implementability:

Results of site surveys and engineering studies have shown that the positive barrier fish screen can be constructed at the proposed site, and will operate in accordance with DFG and NMFS intake screen design criteria. Geotechnical and other site testing will be performed to insure that the screen can be implemented and provide reliable operations as part of the final engineering design phase. Environmental documentation for the project has not identified any significant adverse environmental impacts which can not be mitigated to less-than-significant levels. Given results of the preliminary engineering feasibility study and environmental assessment, there is a high degree of confidence that the positive barrier fish screen can be implemented at the proposed site, and will achieve the objective of substantially reducing direct entrainment of fish inhabiting the Sacramento River. The project team will continue to coordinate with state and federal resource agencies throughout the permitting and final engineering phase, to insure that the design, construction, and operation of the proposed positive barrier fish screen can be effectively implemented within both the context of regulatory and site-specific environmental and physical constraints.

2. **Costs and Schedule to Implement Proposed Project**

- a. **Budget Costs:** The estimated budget for completion of final design and construction of the project is \$7,100,000. The project involves construction of a new, state of the art fish screen and moving of the point of diversion to a more stable, less fishery sensitive area of the river. The estimated construction costs for the fish screen are comparable to those identified in studies of similarly sized facilities along the Sacramento River.

The estimated budget for the Project are summarized in Table 1 - *Estimated Budget & Scope of Work*, included in Section 2. The costs are included for various phases of the project with a breakdown of the tasks accompanying each phase. Phases 1 & 2 of the project are fully funded.

The District has budget for operation and maintenance (O&M) separately and will pay for the annual cost of O & M, as part of the local contribution to the project.

All of the work is being performed under service contracts, with the exception of legal and administration, which will be performed by the District and their law firm. The legal and administration costs are estimated at 5% of the Total Construction Costs. The construction contract will be awarded to the lowest responsive bidder, through publicly advertised competitive bid process. Other miscellaneous costs included in the budget are right of way acquisition and utility relocations.

Table 2 - *Project Budget and Annual Expenditures*, included in Section 2, delineates the project funding and annual expenditures which have occurred or are anticipated. This table summarizes the budget for the entire project, including incidental take monitoring and behavioral barrier testing. The District is requesting CALFED funding to complete the *Final Design/Permitting, Relocation/Construction and Construction/Implementation* Phases of the project. The District is seeking a total of \$3,510,000 from CALFED for completing of the project. This funding will be used in partnership with federal CVPIA funds, which have been earmarked for the project.

The amount requested represents about 43% of the total project costs as outlined in figure 2. The District has contributed a significant amount of funding to date for the project. The District will also contribute the cost of right-of-way acquisition to the project. In addition, the District will provide the annual operation and maintenance budget for the facility, which is estimated as \$35,000 per year, over the 40 year life of the project.

- b. **Schedule Milestones:** Table No. 3, *Schedule of Quarterly Expenditures*, Section 2, includes detailed start and finish dates for each task. The major milestones are:

- ▶ Issue Bid Documents by January 28, 1998
- ▶ Start of Construction by March 31, 1998
- ▶ Completion of Work in the River by November 17, 1998
- ▶ Begin Start-Up Testing by April 16, 1999
- ▶ Completion of NMFS/DFG screen system evaluation by November 30, 2001

Table No. 3 includes a quarterly budget breakdown of each task. Payments for service contracts will be made on a monthly basis, as described under paragraph 1.e. The goal is to have sufficient quarterly funding in place to cover monthly billings.

It should be noted that Phase IV of the work has been delayed due to lack of state funding. Although the District intends to perform as much of this activity prior to the start of the major construction activity, a large amount of this work may be delayed until the start of construction.

c. Third Party Impacts:

The only third party impact from the project is the need to acquire right-of-way for the project. About 16 acres of right-of-way will be required to construct and maintain the facility. The land acquisition will affect only one District landowner. As mitigation, the District will purchase the land in-fee from the landowner. The landowner understands and acknowledges the District is undertaking a fish protection project, which includes relocating the District's pumping plant and constructing a new fish screen facility. The District has entered into negotiations with the landowner, and the landowner is willing to negotiate the sale of right-of-way for the fish screen facility. The District will supply this right-of-way as part of the local contribution to the project.

3. Applicant Qualifications

- a. Overview of Team: The District's team for this project will be organized as shown on the Organization Chart, Figure 1. The District's consultants were selected based upon qualifications and their familiarity with the District and the facility. The Engineer for the project, Ensign & Buckley Consulting Engineers (EB), has been providing engineering services to the District for over 15 years. EB has provided services in the planning, design, and construction of over ten fish screen projects in the State of California, and the existing Princeton Pumping Plant was designed by EB. The Environmental Consultant for the project, Hanson Environmental, Inc. (Hanson), is a well-respected biological consulting firm, specializing in fisheries protection. Hanson performed the behavioral barrier testing and has been performing the monitoring work at the Princeton Pumping Plant diversion. Hanson's team has prepared environmental documents and permit applications for several screening projects. The District has been administering funding for the work on this project for over three years, and is familiar with the Category III funding administration requirements. A qualified contractor will be selected to perform the work. The construction contract will be awarded by competitive bid, with minimum qualification requirements included in the bid documents.
- b. Responsibilities of Personnel: Following is a brief description of the responsibilities of the key personnel:
- ▶ Ferrel H. Ensign, Ensign & Buckley Consulting Engineers, Program Manager: Development of concepts and designs, quality assurance, budget control, technical review, review of correspondence and reports, coordination with the District and agencies, and assist Project Engineer with coordinating the work of the design team. Development of Construction Quality Control Inspection Plan (QCIP) and supervision of construction management activities.
 - ▶ Charles H. Hanson, Ph.D, Hanson Environmental, Inc., Environmental Program Manager: Responsible for preparation of environmental documentation and permit applications in response to requirements for Endangered Species Act consultation and conferencing, coordination with the federal nexus agency regarding Endangered Species Act and NEPA compliance, Permitting, and environmental documents necessary to comply with CEQA/NEPA requirements. Responsible for input regarding species composition, seasonal periods of occurrence, length-frequency distribution in support of engineering design criteria, and the estimation of fisheries benefits resulting from the positive barrier fish screen. Assessment of potential impacts and mitigation measures required to compensate the project impacts resulting from construction and operation of the facility.
 - ▶ Lisa Weber, Reclamation District No. 1004, Project Manager: Responsible for administration of all funding from CVPIA, Proposition 204, and any other funding sources. Coordinates activities with the District's Board. Responsible for budgeting, communication, and coordination with state and federal agencies regarding the project.
 - ▶ Gary Bailey, Reclamation District No. 1004, District Manager: Responsible for providing input into fish screen design, coordination of field activities, and supervision of the District's operation and maintenance staff.
 - ▶ Stephen R. Sullivan, Ensign & Buckley Consulting Engineers, Project Engineer: Responsible for day-to-day organization and execution of the work, development of designs, coordination and assignments to team members, preparation of agendas and meeting minutes, preparation of design details and calculations, review of design drawings, and preparation of specifications.

Assists in development of QCIP and responsible for overall construction management. Acts on the behalf of Program Manager in his absence.

- ▶ Mark S. Martin, Ensign & Buckley Consulting Engineers, Civil Engineer: Responsible for preparation of civil/structural design details, drawing reviews, specification preparation, and preparation of cost estimates. Assists with submittal reviews and inspections during construction. Acts on the behalf of the Project Engineer in his absence.
- ▶ Kevin D. Kelly, Ensign & Buckley Consulting Engineers, Mechanical Engineer: Responsible for mechanical design; assist in drawing reviews, assure compliance of the pump sump design with the Hydraulic Institute Standards, specification preparation, and preparation of cost estimates for mechanical/electrical equipment. Assists with submittal review and inspections during construction.
- ▶ Jerry Bagley, Power Systems Engineering, Electrical Engineer: Provides design details, specification sections and cost estimates for all electrical equipment, including automation, controls, and any required telemetry. Responsible for coordinating the site power and line side protection requirements with PG&E. Assists with submittal review and inspections during construction.
- ▶ Raymond Costa, Kleinfelder, Inc., Geotechnical Engineer: Supervises performance of Geotechnical Engineering Services, including field exploration laboratory testing, engineering analysis, and preparation of the geotechnical report. Provides input into design details and specification requirements, and performs review of the plans and specifications. Supervises testing services during construction.

c. Relevant Experience of Key Personnel: Following is a summary of the relevant experience of the supervisory and key staff:

- ▶ Ferrel H. Ensign is a Registered Civil and Agricultural Engineer in the State of California. He is a founding partner in Ensign & Buckley Consulting Engineers, a Fellow in ASCE, and has 36 years of experience in the planning, design, and construction of water resource projects. Mr. Ensign has been responsible for the design of over 10 fish screens that have been constructed and in the preliminary design of other facilities that were subsequently constructed. He is knowledgeable of current fish screening criteria of the NMFS and DFG, and has designed trashracks, trash rakes, and log booms for pumping plants and hydroelectric facilities. He has designed sediment exclusion facilities for pumped and gravity irrigation diversions, and hydroelectric facilities. He has acted as the Program Manager on numerous major water resource projects for both private and public agencies including the supervision of the design criteria preparation, plans preparation, specifications preparation, construction management, and start-up testing.
- ▶ Dr. Charles H. Hanson is a professional fisheries biologist, with over 20 years of experience in addressing fisheries issues on the Sacramento River and Bay-Delta system. Dr. Hanson has supervised biological assessments and monitoring programs at over 15 major water diversions, including the biological evaluation of the acoustic behavioral barrier testing at the District's Princeton Pumping Plant in 1995, and Winter-Run Chinook Salmon incidental take monitoring at the site during 1995 and 1996. Dr. Hanson has supervised the preparation of over 75 technical reports and papers addressing intake screening issues, and has prepared environmental documentation, permit applications, and environmental monitoring and compliance programs for a large number of water diversions on the Sacramento River and elsewhere.

- ▶ **Lisa Weber** is the Office Manager for Reclamation District No. 1004, and is life-long resident of Colusa County, with 15 years experience in the agricultural water industry. She has worked for the District for over 8 years, and has extensive knowledge of agriculture, water rights, and related water issues. She was responsible for administration of the budget for the experimental fish barrier program under CVPIA and administering funding for the feasibility and preliminary design of the fish screen from CVPIA, Category III, and Proposition 70 funding sources.
- ▶ **Gary Bailey** is the District Manager for Reclamation District No. 1004, and is a life-long resident of Colusa County. He has been in charge of the District's irrigation operations and maintenance of its pumping facilities and delivery system since 1981. He has served as the District Manager from 1985 to the present. His responsibilities include overseeing the irrigation, recycle and drainage system, pumping plant operation, and maintenance of the levee system. He has been providing input into the design of the project from the outset.
- ▶ **Stephen R. Sullivan** is a Registered Civil Engineer in the State of California, with a background in design and construction of fish screening facilities, pumping plants, levee construction, and irrigation facilities. He is experienced in the application of the NMFS and the DFG fish screen criteria, and is familiar with the latest technologies in the field and the latest designs used on the Sacramento River. He also has experience in dealing with the agencies on the Anadromous Fish Screen Program Technical Team and is familiar with the U.S. Army Corps of Engineers', the Reclamation Board's, and the DFG's requirements for construction in the Sacramento River. Recent projects include: preliminary design of the Princeton Pumping Plant Fish Screen Facility; prepared long-term planning studies for screening the Natomas Mutual Water Company's five (5) Sacramento River Diversions; evaluated improvements to the Northern California Power Authority's Beaver Creek Diversion; and prepared design details for the preliminary design of new fish screening facility for PG&E's intake on the Eel River. He has also designed and supervised the construction of a number of facilities on the Sacramento River and its tributaries.
- ▶ **Mark S. Martin** is a Registered Civil Engineer in the State of California, with experience in the design of fish screens, pumping plants, levee construction, irrigation facilities, dam outlet works, and hydroelectric facilities. Mr. Martin has been involved in the design and evaluation of three (3) recent fish screen projects. He has also designed and supervised the construction of a number of irrigation and flood control facilities on the Sacramento River and its tributaries.
- ▶ **Kevin D. Kelley** is a Registered Mechanical Engineer in the State of California, with experience in equipment selection and application to fish screen projects, pumping plants, irrigation facilities, and hydroelectric plants.
- ▶ **Jerry Bagley** is a Registered Electrical Engineer in the State of California. Mr. Bagley has experience in the design of power supply and control systems for fish screens, pumping plants, irrigation facilities, and hydroelectric facilities. Controls for fish screens have included provisions to initiate and/or increase cleaning, for local and remote alarms, and to automatically reduce flows if the head across the screens exceeds a specified amount. He has designed and performed start-up testing of SCADA systems for varying degrees of remote monitoring and control.
- ▶ **Raymond Costa** is a Registered Civil and Geotechnical Engineer in the State of California. Mr. Costa is experienced in deep foundation design, levee design, construction shoring and dewatering, and embankment stability studies.

4. Compliance with Standard Terms and Conditions

The District has reviewed the standard terms and conditions, and does not take exception to the conditions. Section 2 includes the Proposal Submittals requested from the District and their Consultants.

The standard clause for service and consulting services contracts will be included in all Consultant Service Agreements for which CALFED funds are used. A copy of the agreements will be provided to CALFED. The standard clauses for contracts with Public Entities are acceptable to the District, and can be included in the Contract between the District and CALFED.

Public Works/Construction standard contract clauses will be included in the Contract Documents for the construction work. The Contract Documents will be provided to CALFED for review, prior to bidding, if requested. Submittals will be provided to CALFED when the construction contract is awarded.

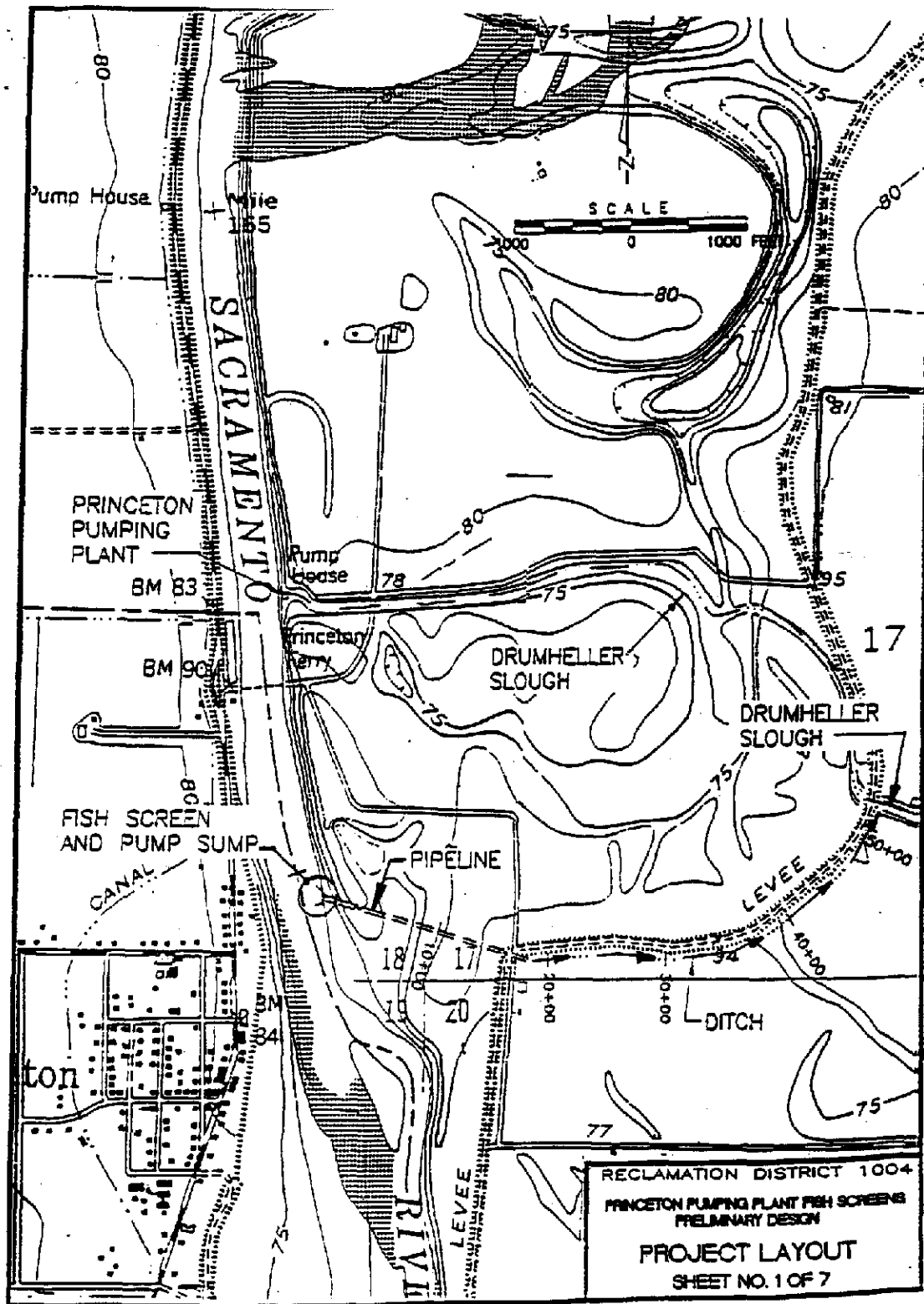
Section 2

Proposal for Princeton Pumping Plant Fish Screen Facility Cost Share Funding

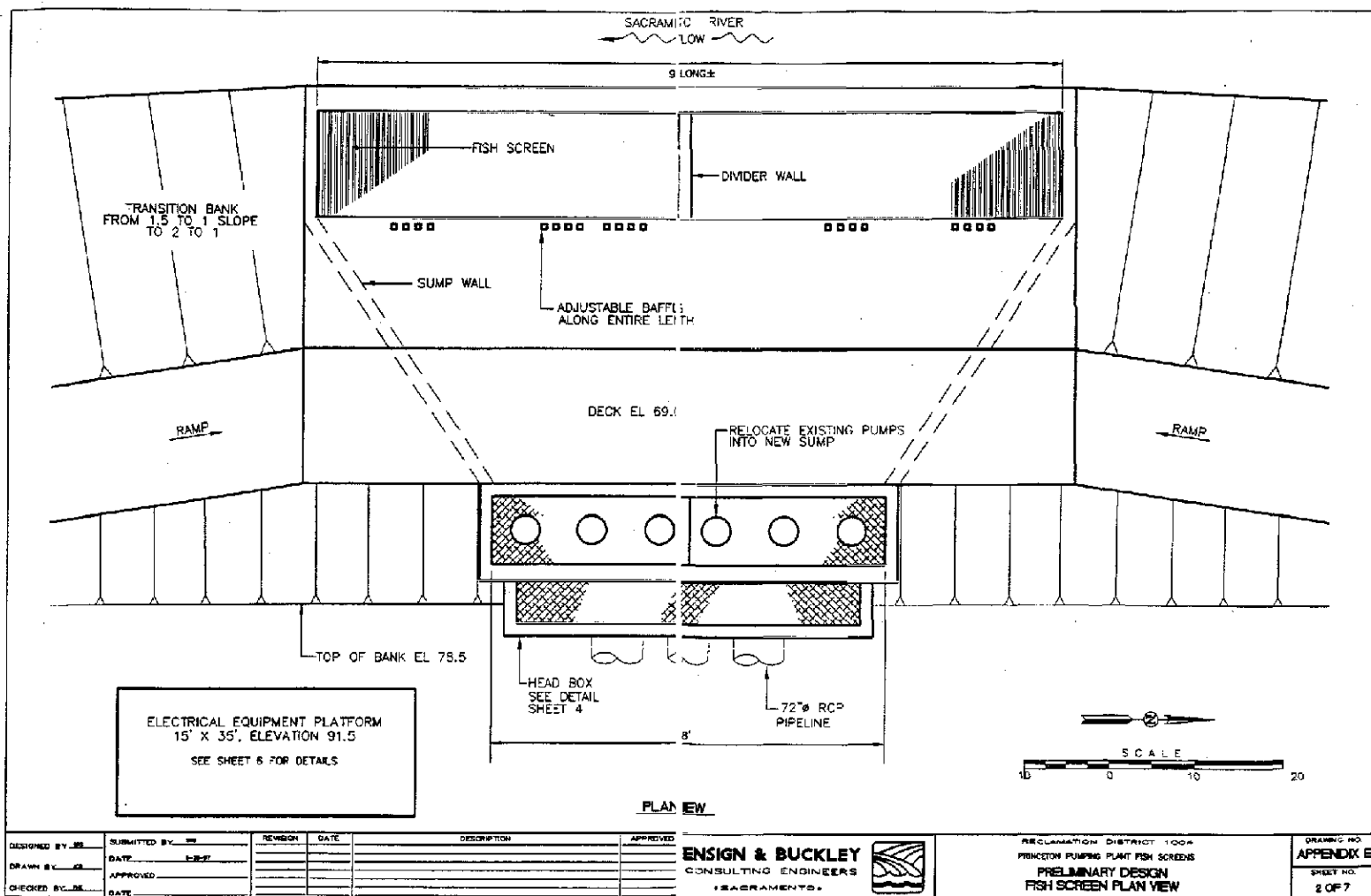
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| <u>Item No.</u> | <u>Description</u> |
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| 2. | Preliminary Design and Construction Cost Estimate, Table 8.1* |
| 3. | Estimate of Operation, Maintenance, and Replacement Costs, Table 8.2* |
| 4. | Organization Chart, Figure 1 |
| 5. | Estimated Budget and Scope of Work, Table No. 1 |
| 6. | Project Funding and Annual Expenditures, Table No. 2 |
| 7. | Schedule of Quarterly Expenditures, Table No. 3 |
| 8. | Proposal Submittals |

* From June 1997 *Feasibility and Preliminary Design Report, Princeton Pumping Plant Fish Screen*



1-004968



| DESIGNED BY | SUBMITTED BY | REVISION | DATE | DESCRIPTION | APPROVED |
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CONSULTING ENGINEERS
SACRAMENTO

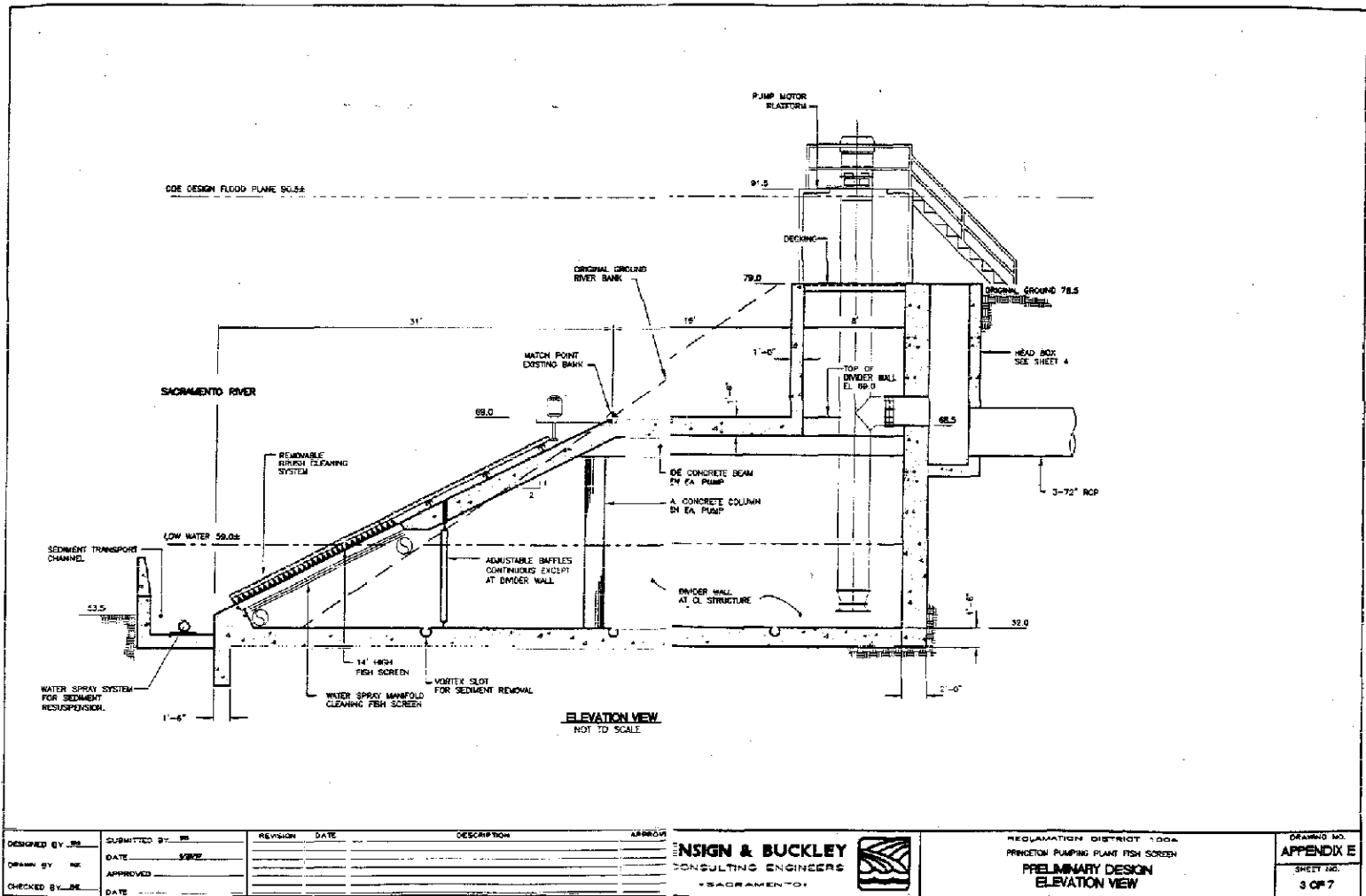


RECLAMATION DISTRICT 1000
PRINCETON PUMPING PLANT FISH SCREENS
PRELIMINARY DESIGN
FISH SCREEN PLAN VIEW

DRAWING NO.
APPENDIX E
SHEET NO.
2 OF 7

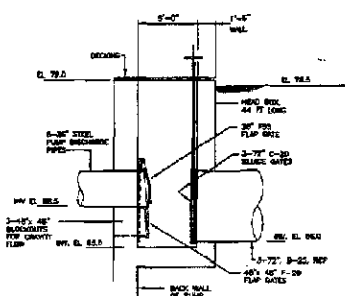
1-004968

1-004969

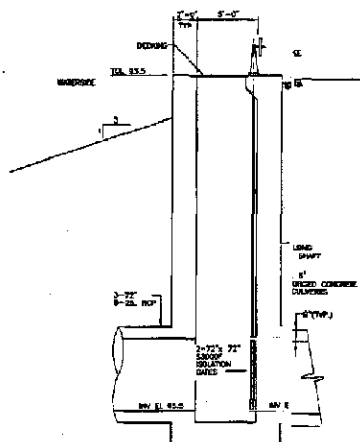


1-004969

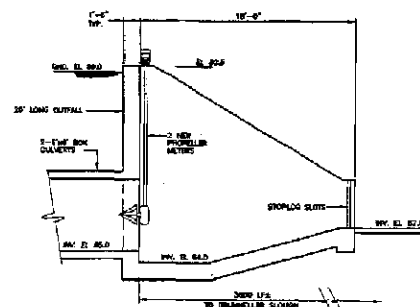
1-0004970



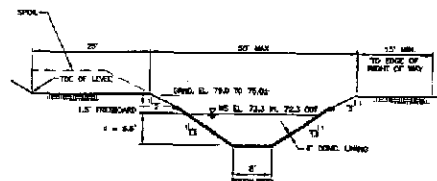
HEAD BOX DETAIL
NOT TO SCALE



GATE SHAFT DETAIL
NOT TO SCALE



PIPELINE OUTFALL DETAIL
NOT TO SCALE



DITCH CROSS SECTION
NOT TO SCALE

| | | | | | |
|-----------------|-----------------|----------|------|-------------|----------|
| DESIGNED BY JRM | SUBMITTED BY RE | REVISION | DATE | DESCRIPTION | APPROVED |
| DRAWN BY JRM | DATE 10/1/70 | | | | |
| CHECKED BY JRM | APPROVED | | | | |
| | DATE | | | | |

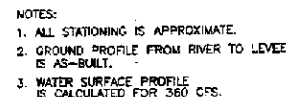
INSIGN & BUCKLEY
CONSULTING ENGINEERS
SACRAMENTO



RECLAMATION DISTRICT 100A
PRINCETON PUMPING PLANT FISH SCREENS
PRELIMINARY DESIGN
DETAILS

DRAWING NO.
APPENDIX E
SHEET NO.
4 OF 7

1-004971



| | | | | | |
|------------------------|-------------------------|----------|------|-------------|----------|
| DESIGNED BY: <u>JS</u> | SUBMITTED BY: <u>JS</u> | REVISION | DATE | DESCRIPTION | APPROVED |
| DRAWN BY: <u>JS</u> | DATE: <u>12/10/00</u> | | | | |
| CHECKED BY: <u>JS</u> | APPROVED: _____ | | | | |
| | DATE: _____ | | | | |

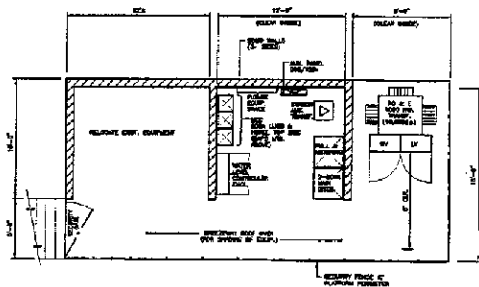
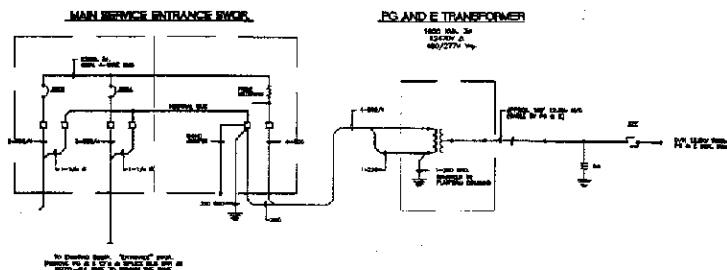
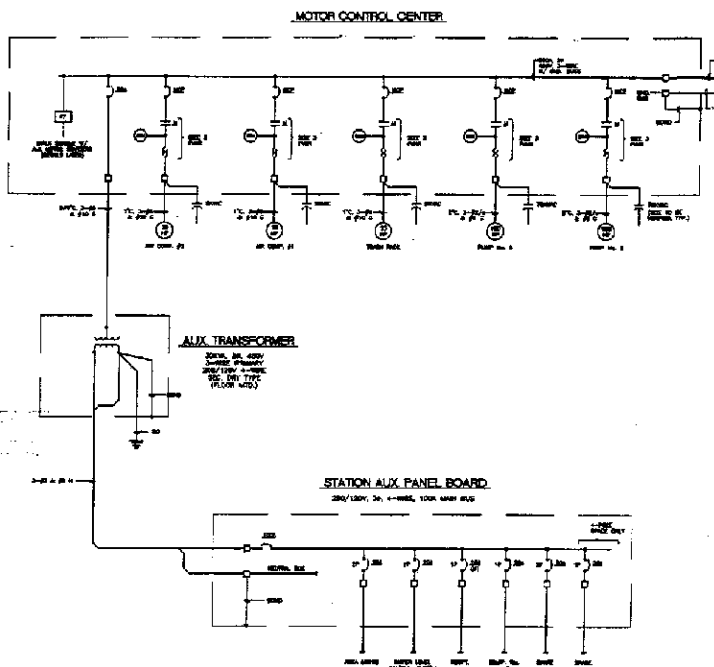
ENSIGN & BUCKLEY
CONSULTING ENGINEERS
SACRAMENTO



RECLAMATION DISTRICT 1004
PRINCETON PUMPING PLANT FISH SCREENS
PRELIMINARY DESIGN
PROFILE

DRAWING NO.
APPENDIX E
SHEET NO.
5 OF 7

1-004972



| DESIGNED BY | SUBMITTED BY | REVISION | DATE | DESCRIPTION | APPROVED |
|-------------|--------------|----------|------|-------------|----------|
| DESIGNED BY | DATE | | | | |
| DRAWN BY | APPROVED | | | | |
| CHECKED BY | DATE | | | | |

IGN & BUCKLEY
INSULATING ENGINEERS
SACRAMENTO

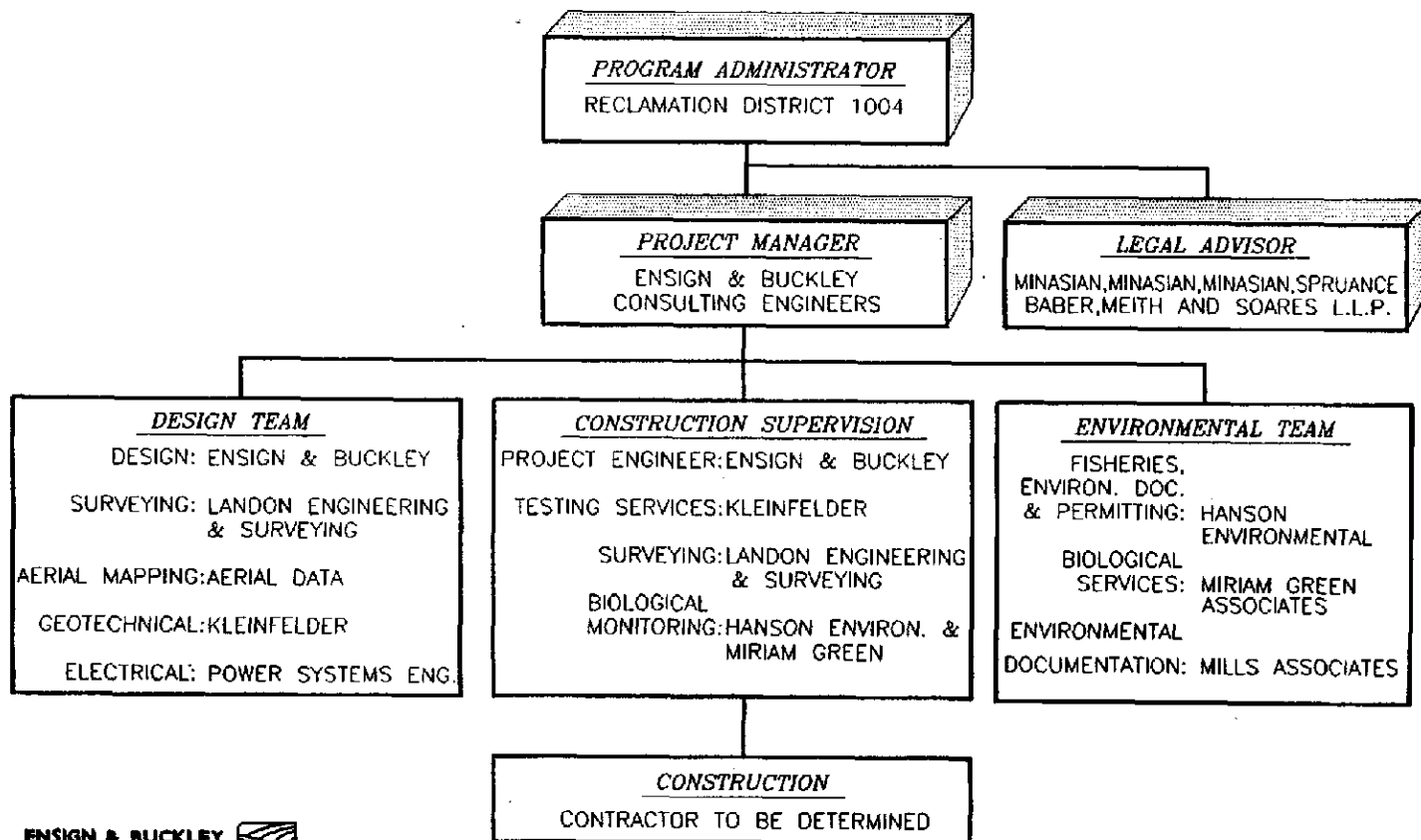


RECLAMATION DISTRICT 1004
PRINCETON PUMPING PLANT FISH SCREENS
PRELIMINARY DESIGN
ELECTRICAL DETAILS

DRAWING NO.
APPENDIX E
SHEET NO.
6 OF 7

ORGANIZATION CHART

DESIGN AND CONSTRUCTION OF PRINCETON PUMPING PLANT FISH SCREEN FACILITY



ENSIGN & BUCKLEY
CONSULTING ENGINEERS
SACRAMENTO



JULY 18, 1997

FIGURE 1

1-004974

1-004974

Table 8.1

FEBRUARY 10, 1997

RECLAMATION DISTRICT 1004
PRINCETON PUMPING PLANT
FISH SCREEN PRELIMINARY DESIGN

DESIGN & CONSTRUCTION COST ESTIMATE

| ITEM # | ITEM DESCRIPTION | QUANTITY | UNIT | UNIT PRICE (\$) | TOTAL PRICE (\$) |
|--------|---------------------------------------|----------|------|-----------------|------------------|
| 1 | Mobilization/Demobilization | 1 | LS | 50,000.00 | 50,000 |
| 2 | Dewatering | 1 | LS | 210,000.00 | 210,000 |
| 3 | Earthwork | | | | |
| 3.1 | Excavation | 8,000 | CY | 4.00 | 32,000 |
| 3.2 | Backfill | 5,500 | CY | 8.00 | 44,000 |
| 4 | Concrete | 1,250 | CY | 750.00 | 937,500 |
| 5 | Reinforced Concrete Pipeline | 1,580 | LF | 750.00 | 1,185,000 |
| 6 | Box Culvert Through Levee | 1 | LS | 170,000.00 | 170,000 |
| 7 | Ditch Construction | 3,600 | LF | 100.00 | 360,000 |
| 9 | Rip-Rap | 1,000 | TON | 50.00 | 50,000 |
| 10 | Sitework | 1 | LS | 75,000.00 | 75,000 |
| 11 | Miscellaneous Metalwork | | | | |
| 11.1 | Steel Plates & Shapes | 24,000 | LB | 2.50 | 60,000 |
| 11.2 | Stairs | 100 | LF | 175.00 | 17,500 |
| 11.3 | Handrails | 460 | LF | 25.00 | 11,500 |
| 11.4 | Ladders | 110 | LF | 50.00 | 5,500 |
| 11.5 | Decking | 1,200 | SF | 25.00 | 30,000 |
| 12 | Fish Screen | 1 | LS | 250,000.00 | 250,000 |
| 13 | Water Spray & Sediment Removal System | 1 | LS | 150,000.00 | 150,000 |
| 14 | Mechanical Brush Cleaning System | 1 | LS | 100,000.00 | 100,000 |
| 15 | Adjustable Baffles | 1 | LS | 80,000.00 | 80,000 |
| 16 | Bulkheads | 1 | LS | 75,000.00 | 75,000 |
| 17 | Piping & Gates | 1 | LS | 150,000.00 | 150,000 |
| 18 | Relocate Pumps & Motors | 1 | LS | 10,000.00 | 10,000 |
| 19 | Two New Pumps & Motors | 1 | LS | 200,000.00 | 200,000 |
| 20 | Utility Relocations | 1 | LS | 25,000.00 | 25,000 |
| 21 | Electrical | | | | |
| 21.1 | New Overhead 12.5kV Service | 1 | LS | 40,000.00 | 40,000 |
| 21.2 | New Electrical Equipment & Controls | 1 | LS | 210,000.00 | 210,000 |

Rounded Subtotal (Direct Construction Costs): 4,530,000

Right of Way (16 acres @ \$5000): 80,000

Environmental Mitigation: 200,000

Engineering & Coordination with Regulatory Agencies @ 8.0%: 360,000

Construction Supervision @ 6%: 270,000

Legal & Administration @ 5%: 230,000

Geotechnical: 150,000

Surveys: 35,000

Rounded Subtotal: 5,860,000

Contingency @ 20%: 1,172,000

Total Estimated Design & Construction Costs: 7,032,000

Screen Evaluation Program: 80,000

Rounded Total Estimated Project Costs: 7,100,000

ESTIMATED BUDGET & SCOPE OF WORK

TABLE 1

RECLAMATION DISTRICT 1004
PRINCETON PUMPING PLANT FISH SCREEN FACILITY

| TASK DESCRIPTION | ADMIN. & LEGAL (\$) | SERVICE CONTRACTS (\$) | MISC. COSTS (\$) | PROJECT COSTS (\$) | CALFED COST SHARE (\$) |
|------------------|---------------------------|------------------------------|------------------------|--------------------------|------------------------------|
|------------------|---------------------------|------------------------------|------------------------|--------------------------|------------------------------|

PHASE I - Preliminary Design & Feasibility Study

Total Phase I Costs: 116,158

PHASE II - Expanded Feasibility & Environmental Documentation

Total Phase II Costs: 121,828

PHASE III - Final Design & Permitting

| | | | | | |
|---|----------------|----------------|---------------|----------------|----------------|
| a. Engineering and Coordination | | 430,000 | | 430,000 | 215,000 |
| b. Geotechnical & Surveying | | 155,000 | | 155,000 | 77,500 |
| c. Legal and Administrative | 115,000 | | | 115,000 | 57,500 |
| d. Environmental Mitigation | | 120,000 | | 120,000 | 60,000 |
| e. Right-of-Way Acquisition | | | 80,000 | 80,000 | |
| Total Estimated Phase III Costs: | 115,000 | 705,000 | 80,000 | 900,000 | 410,000 |

PHASE IV - Relocation / Construction

| | | | | | |
|--|---------------|----------------|---------------|----------------|----------------|
| a. Construction | | 864,000 | | 864,000 | 432,000 |
| b. Utility Relocations | | | 30,000 | 30,000 | 15,000 |
| c. Construction Supervision | | 30,000 | | 30,000 | 15,000 |
| d. Legal & Administration | 16,000 | | | 16,000 | 8,000 |
| e. Geotechnical & Surveying | | 10,000 | | 10,000 | 5,000 |
| Total Estimated Phase IV Costs: | 16,000 | 904,000 | 30,000 | 950,000 | 475,000 |

PHASE V - Construction / Implementation

| | | | | | |
|---------------------------------------|----------------|------------------|----------|------------------|------------------|
| a. Construction | | 4,541,000 | | 4,541,000 | 2,270,500 |
| b. Environmental Mitigation | | 120,000 | | 120,000 | 60,000 |
| c. Construction Supervision | | 295,000 | | 295,000 | 147,500 |
| d. Legal & Administration | 147,000 | | | 147,000 | 73,500 |
| e. Geotechnical & Surveying | | 57,000 | | 57,000 | 28,500 |
| f. Screen Evaluation Program | | 90,000 | | 90,000 | 45,000 |
| Total Estimated Phase V Costs: | 147,000 | 5,103,000 | 0 | 5,250,000 | 2,625,000 |

Total Estimated Project Costs Phase III, IV & V: 278,000 6,712,000 110,000 7,100,000 3,510,000

PREPARED BY ENSIGN & BUCKLEY

July 24, 1997

RD10042.mkt

SCHEDULE OF QUARTERLY PENDITURES

TABLE 3

| Page 3A | | | RECLAMATION DISTRICT 1, 1004 PRINCETON PUMPING PLANT & SCREEN | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|----------|----------|--|----------------|------|-----|-----------|-----|-----|-----|-----------|-----|-----------|-----|-----|-----|------|-----|-----|----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|
| Task Name | Duration | Start | Finish | Project Budget | 1997 | | | | | | | | | | | | 1998 | | | | | | 1999 | | | | | | | |
| | | | | | Jan | Feb | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | Ma | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
| Phase IV - Relocation/Construction | 160d | 4/17/97 | 11/25/97 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Administration | 75d | 4/17/97 | 11/15/97 | \$ 36,000 | | | \$15,000 | | | | \$15,000 | | \$ 6,000 | | | | | | | | | | | | | | | | | |
| Inspection, Testing, Surveying | 0d | 4/17/97 | 11/25/97 | \$ 20,000 | | | \$ 9,000 | | | | \$ 9,000 | | \$ 2,000 | | | | | | | | | | | | | | | | | |
| Secure Funding for Relocation | | 7/01/97 | 7/30/97 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levee Crossing | 65d | 7/31/97 | 10/28/97 | \$420,000 | | | | | | | \$300,000 | | \$120,000 | | | | | | | | | | | | | | | | | |
| Utility Relocation's | 30d | 7/31/97 | 9/10/97 | \$ 30,000 | | | | | | | \$ 30,000 | | | | | | | | | | | | | | | | | | | |
| Ditch Construction | 45d | 9/11/97 | 11/11/97 | \$432,000 | | | | | | | \$238,000 | | \$144,000 | | | | | | | | | | | | | | | | | |
| Finish Sitework | 10d | 11/12/97 | 11/25/97 | \$ 12,000 | | | | | | | | | \$ 12,000 | | | | | | | | | | | | | | | | | |
| Total Phase IV | | | | \$950,000 | | | \$ 24,000 | | | | \$642,000 | | \$284,000 | | | | | | | | | | | | | | | | | |

I - 0 0 4 9 7 7

SCHEDULE OF QUARTERLY EDITURES

TABLE 3

Page 4A

RECLAMATION DISTRICT N PRINCETON PUMPING PLANT FLEEN

| Task Name | Duration | Start | Finish | Project Budget | 1997 | | | | | | | | | | | | 1998 | | | | | | | | | | | | 1999 | | | | | | | | | | | |
|----------------------------------|----------|----------|----------|----------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|--|--|----|--|--|--|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | | | | | | |
| Phase V - Construction | 469d | 1/14/98 | 11/1/99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction Supervision | 382d | 1/14/98 | 7/1/99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bidding Process | 55d | 1/14/98 | 3/31/98 | \$ 15,000 | | | | | | | | | | | | | \$ 15,000 | | | | | | | | | | | | | | | | | | | | | | | |
| Advertise Project | 5d | 1/14/98 | 1/20/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bid Period | 20d | 1/21/98 | 2/17/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Review & Award | 30d | 2/18/98 | 3/31/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract Administration | 327d | 4/1/98 | 7/1/99 | \$ 264,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspection, Testing & Surveying | 327d | 4/1/98 | 7/1/99 | \$ 220,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Secure Funding for Construction | 0d | 3/31/98 | 3/31/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start of Construction | 0d | 3/31/98 | 3/31/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 327d | 4/1/98 | 7/1/99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mobilization | 20d | 4/1/98 | 4/28/98 | \$ 60,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| De-watering | 20d | 4/29/98 | 5/26/98 | \$ 240,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavation | 10d | 5/27/98 | 6/9/98 | \$ 38,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concrete | 45d | 6/10/98 | 8/11/98 | \$ 945,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cure | 10d | 8/12/98 | 8/25/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Install Piping & Conduits | 10d | 8/26/98 | 9/8/98 | \$ 140,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Backfill & Rip-Rap | 15d | 9/9/98 | 9/29/98 | \$ 115,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Miscellaneous Metalwork | 20d | 8/26/98 | 9/22/98 | \$ 150,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Establish New Service | 20d | 9/9/98 | 10/3/98 | \$ 298,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Install Fish Screening Equipment | 60d | 8/26/98 | 11/17/98 | \$ 790,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Finish Sitework | 20d | 9/30/98 | 10/27/98 | \$ 78,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remove Sheet Piles | 15d | 10/28/98 | 11/17/98 | \$ 10,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pipeline Construction | 120d | 5/27/98 | 11/10/98 | \$1,422,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Completion of Work in River | 0d | 11/17/98 | 11/17/98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relocate Pumps | 20d | 12/2/98 | 12/29/98 | \$ 255,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Suspend Work for Winter | 77d | 12/30/98 | 4/15/99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start-up & Testing | 55d | 4/16/99 | 7/1/99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | </ | | | |

1-004978

1-004978

**Proposal Submittals
for
Compliance with Standard Terms and Conditions**

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

RECLAMATION DISTRICT NO. 1004

The company named above (hereinafter referred to as "prospective contractor" hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation, and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

LISA WEBER

DATE EXECUTED

7/23/97

EXECUTED IN THE COUNTY OF

COLUSA

PROSPECTIVE CONTRACTOR'S SIGNATURE



PROSPECTIVE CONTRACTOR'S TITLE

PROJECT MANAGER

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

RECLAMATION DISTRICT NO. 1004

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

Ensign & Buckley Consulting Engineers

The company named above (hereinafter referred to as "prospective contractor" hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation, and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

Ferrel H. Ensign

DATE EXECUTED

July 24, 1997

EXECUTED IN THE COUNTY OF

Sacramento

PROSPECTIVE CONTRACTOR'S SIGNATURE

Ferrel H. Ensign

PROSPECTIVE CONTRACTOR'S TITLE

Partner

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Ensign & Buckley Consulting Engineers

SMALL BUSINESS PREFERENCE

NOTICE:

Section 14835, et. seq., of the California Government Code requires that a five percent preference be given to bidders who qualify as a small business. The rules and regulations of this law, including the definition of a small business for the delivery of service, are contained in Title 2, California Code of Regulations, Section 1896, et. seq. A copy of the regulations is available upon request. Questions regarding the preference approval process should be directed to the Office of Small and Minority Business at (916) 322-5060. To claim the small business preference, you must submit a copy of your certification approval letter with your bid.

Are you claiming preference as a small business?

_____ Yes* X No

* Attach a copy of your certification approval letter.

Company Name: **Ensign & Buckley Consulting Engineers**